

CLAIMS

1. A device for controlling an engine, comprising:
combustion noise suppression means for suppressing
combustion noise of a combustion chamber; and

control means for controlling the combustion noise
suppression means, characterized in that the device further
includes

control amount setting means for setting a control
amount of the combustion noise suppression means so that
target combustion noise characteristics corresponding to a
required amount of acceleration or deceleration exhibit a
slower change in combustion noise than combustion noise
characteristics corresponding to output characteristics of
the engine over before and after acceleration or
deceleration, and

the control means controls the combustion noise
suppression means according to the control amount set by
the control amount setting means.

2. The device for controlling an engine according to
claim 1, wherein

the engine is connected to manual transmission means,
and

the target combustion noise characteristics are set so
that constant-combustion-noise lines, which represent on a
coordinate plane with the speed and torque of the engine

being coordinate axes distribution of combustion noise values of the engine within a predetermined range on the coordinate plane, provide a smaller absolute value of a speed variation relative to a torque variation from any point on the coordinate plane than constant-output lines which represent on the coordinate plane distribution of output values of the engine within the predetermined range.

3. The device for controlling an engine according to claim 1, wherein

the engine is connected to automatic transmission means, and

the target combustion noise characteristics are set so that constant-combustion-noise lines, which represent on a coordinate plane with the speed and torque of the engine being coordinate axes distribution of combustion noise values of the engine within a predetermined range on the coordinate plane, provide a larger absolute value of a speed variation relative to a torque variation from any point on the coordinate plane than constant-output lines which represent on the coordinate plane distribution of output values of the engine within the predetermined range.

4. The device for controlling an engine according to claim 2 or 3, wherein

the predetermined range is such that the speed and torque of the engine are both under the respective

predetermined values.

5. The device for controlling an engine according to any one of claims 1 to 4, further comprising:

required output calculation means for calculating a required output based on the required amount of acceleration or deceleration;

transition time calculating means for calculating transition time before the required output is reached;

judgment means for judging whether a difference of a current output and the required output equals to or is greater than a predetermined value; and

correction means for correcting the control amount based on the transition time so that a change in the combustion noise is slower if the difference equals to or is greater than the predetermined value.

6. A method for controlling an engine, comprising:

a setting step of setting a control amount of combustion noise suppression means for suppressing combustion noise of a combustion chamber, wherein for a vehicle equipped with manual transmission means, the control amount is set so that constant-combustion-noise lines, which represent on a coordinate plane with the speed and torque of the engine being coordinate axes distribution of combustion noise values of an engine within a predetermined range on the coordinate plane, provide a

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smaller absolute value of a speed variation relative to a torque variation from any point on the coordinate plane than constant-output lines which represent on the coordinate plane distribution of output values of the engine within the predetermined range, and for a vehicle equipped with automatic transmission means, the control amount is set so that the constant-combustion-noise lines provide a larger absolute value of a speed variation relative to a torque variation from any point on the coordinate plane than the constant-output lines; and

a control step of controlling the combustion noise suppression means according to the set control amount.